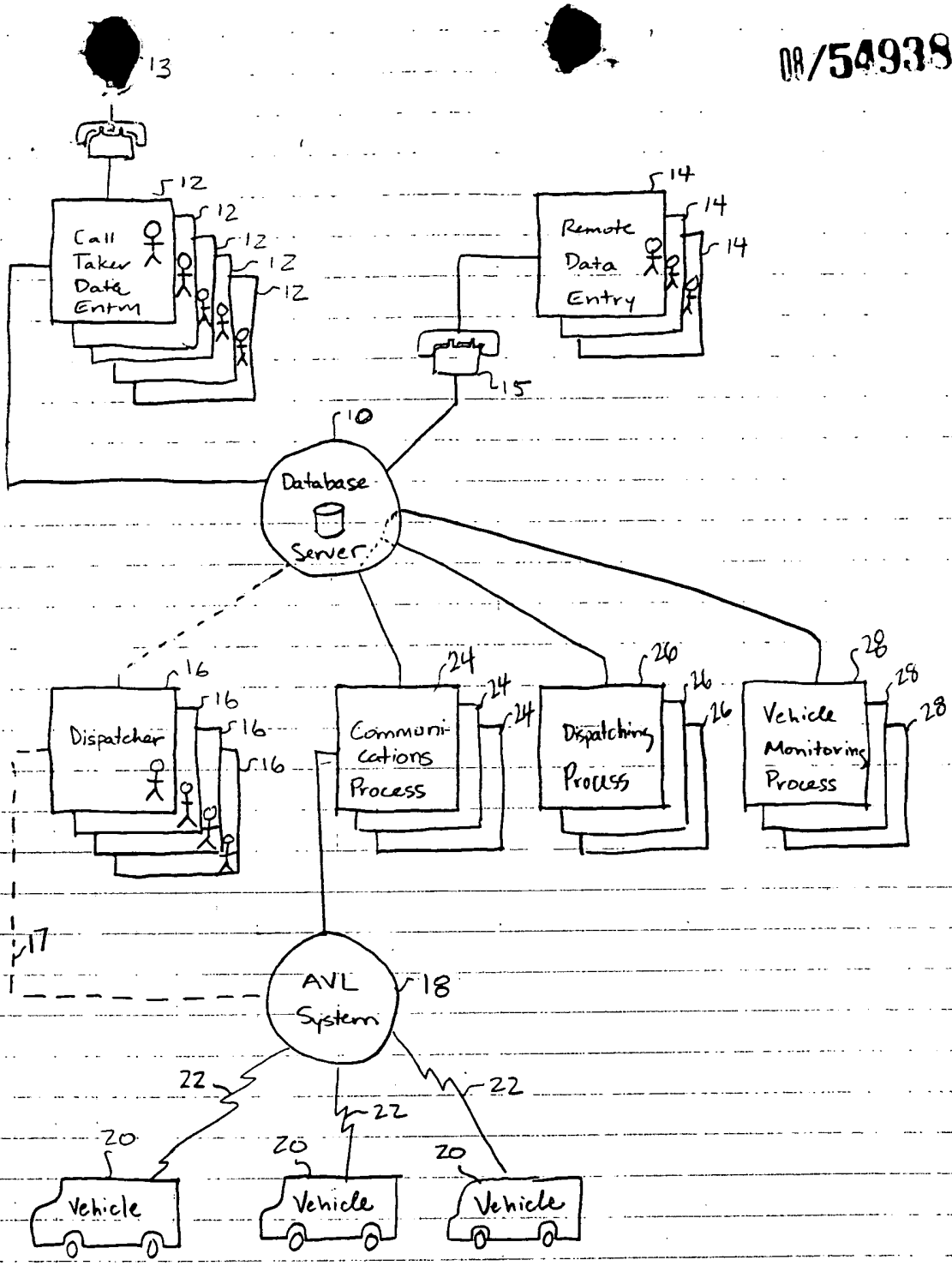

13
12
Call Taker Data Entry
12
12
12
12
14
Remote Data Entry
14
14
15
10
Database Server
16
Dispatcher
16
16
16
24
Communications Process
24
24
26
Dispatching Process
26
26
28
Vehicle Monitoring Process
28
28
17
AVL System
18
22
22
22
20
Vehicle
20
Vehicle
20
Vehicle

Fig. 1

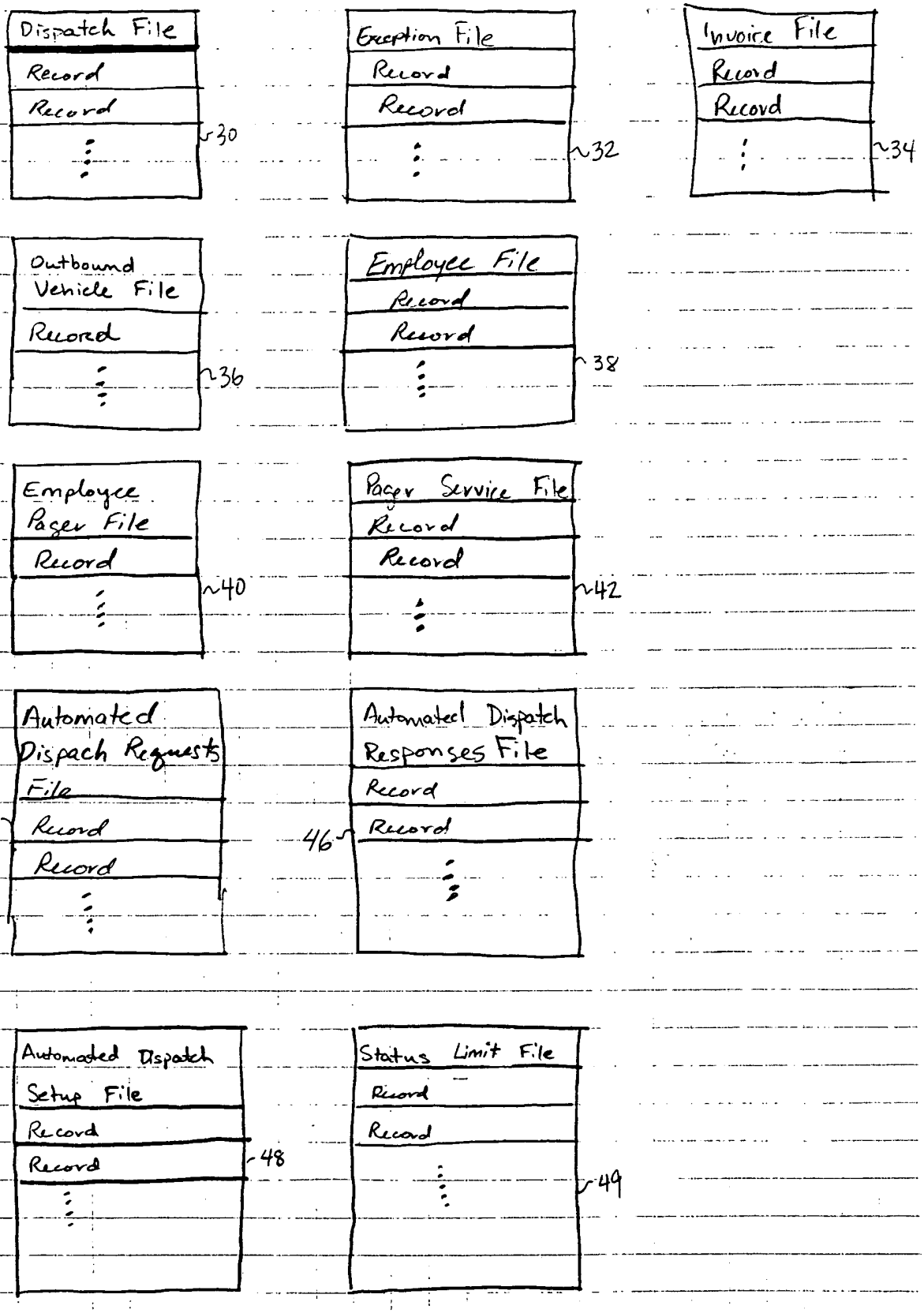

Dispatch File
Record
Record
30
Exception File
Record
Record
32
Invoice File
Record
Record
34
Outbound Vehicle File
Record
36
Employee File
Record
Record
38
Employee Pager File
Record
40
Pager Service File
Record
Record
42
Automated Dispach Requests File
44
Record
Record
Automated Dispatch Responses File
Record
46
Record
Automated Dispatch Setup File
Record
Record
48
Status Limit File
Record
Record
49

Fig. 2

Dispatch File

1 Transport ID Number
2 Status Flag (= " ", "D", "C", or "F")
3 Date of Service
4 Appointment Time (= <time> or "ASAP")
5 Lead Time
6 Transport Type (Wheelchair/Basic/AdvancedLifeSupport)
7 Vehicle ID Number
8 Driver Employee Number
9 Attendant Employee Number
10 Pickup Location
11 Pickup Latitude
12 Pickup Longitude
13 Destination Location
14 Destination Latitude
15 Destination Longitude
16 Time of Call
17 Time Crew Notified
18 Time Crew Dispatched
19 Time Crew En Route to Pickup (Scene)
20 Time Crew Arrived at Pickup (Scene)
21 Time Crew En Route to Destination
22 Time Crew Arrived at Destination
23 Time Crew Reported as Available
24 Reason for transport 1
25 Reason for transport 2
26 Reason for transport 3
27 Reason for transport 4
28 Patient ID number
29 Name of caller
30 Contract number
31 Base rate codes
32 Mileage rate codes
33 Extra services rate codes
34 Billing address codes

Fig. 3A

Invoice File

1Transport ID Number
2Date of Service
3Vehicle ID Number
4Driver Employee Number
5Attendant Employee Number
6Pickup Location
7Destination Location
8Time of Call
9Time Crew Notified
10Time Crew Dispatched
11Time Crew En Route to Pickup (Scene)
12Time Crew Arrived at Pickup (Scene)
13Time Crew En Route to Destination
14Time Crew Arrived at Destination
15Time Crew Reported as Available
16Reason for transport 1
17Reason for transport 2
18Reason for transport 3
19Reason for transport 4
20Patient ID number
21Name of caller
22Contract number
23Base rate codes
24Mileage rate codes
25Extra services rate codes
26Billing address codes

Fig. 3B

Outbound Vehicle File

1Vehicle ID Number
2Transport ID Number

Fig. 3C

Employee File

1Employee ID Number
2Employee Name

Fig. 3D

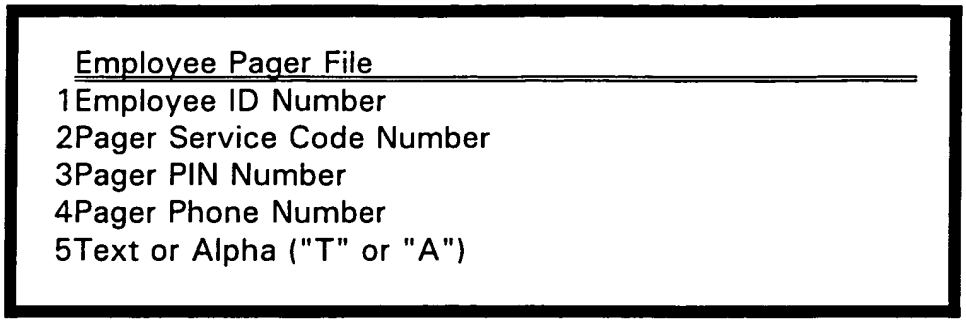


Fig. 3E

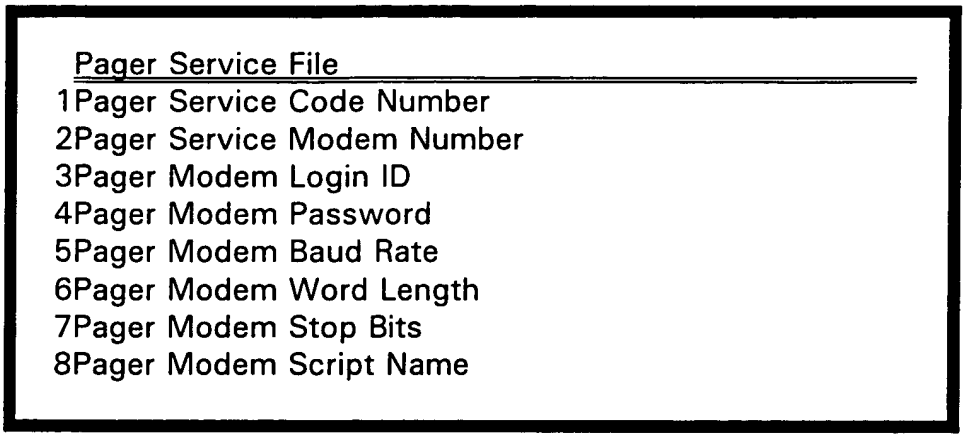


Fig. 3F

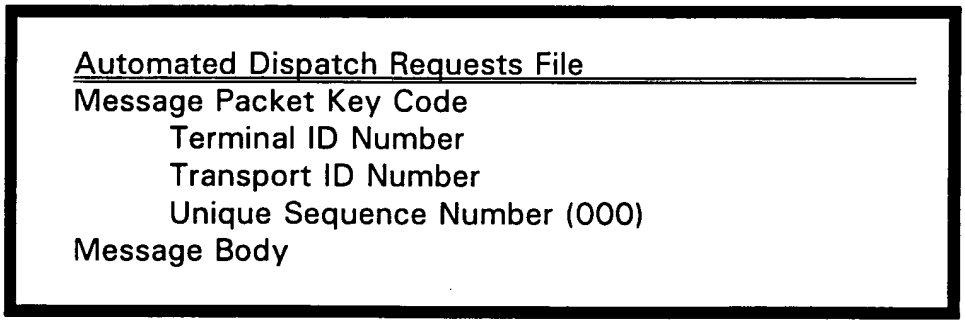


Fig. 3G

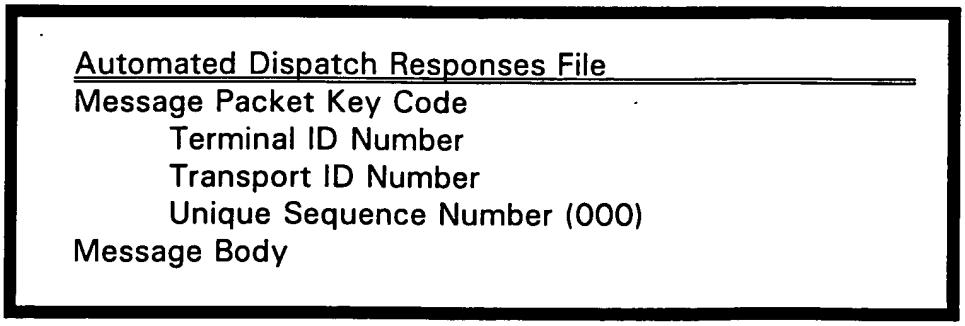


Fig. 3H

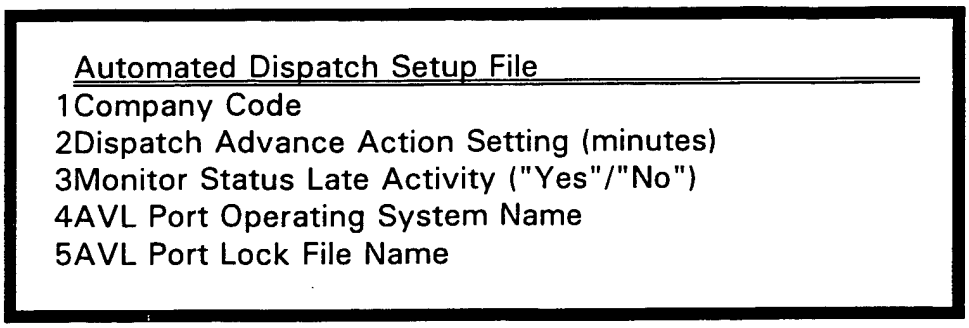


Fig. 3I

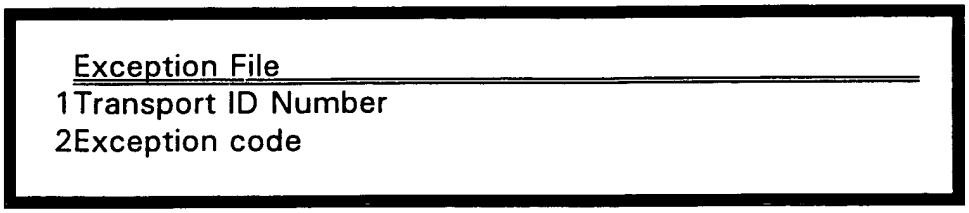


Fig. 3J

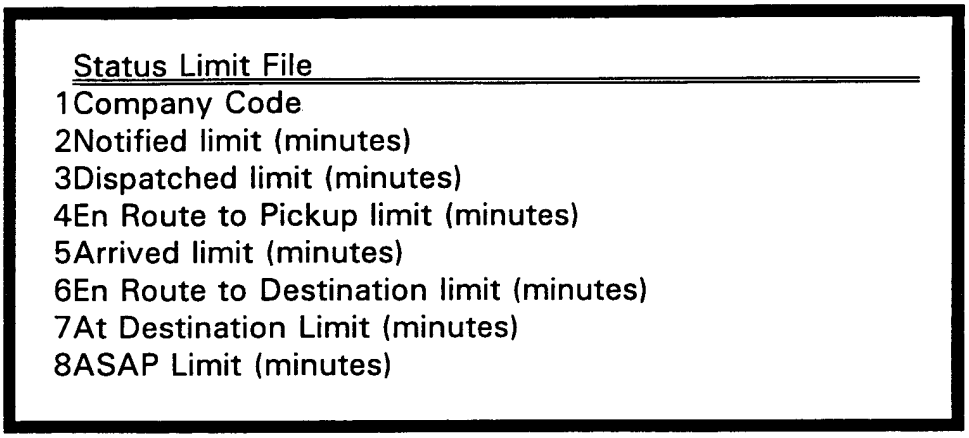


Fig. 3K

From CAD

record code = 01
record ID = transport number + terminal number + sequence (000)
transport / vehicle type (als / bls / w/c)
pick up address
pick up city
pick up state
pick up zip code
quantity of vehicle to return from search
CRC

Fig. 3K-1

From AVL

record code = 02
record ID = transport number + terminal number + sequence (000)
vehicle string (sorted closest to farthest away from address)
CRC

Fig. 3K-2

From CAD

record code = 10
record ID = transport number + terminal number + sequence (000)
vehicle ID number
pick up address
pick up city
pick up state
pick up zip
destination address
destination city
destination state
destination zip
CRC

Fig. 3L-1

From AVL

record code = 11
record ID = transport number + terminal number + sequence (000)
route string
CRC

Fig. 3L-2

From CAD

record code = 30
record ID = transport number + terminal number + sequence (000)
vehicle ID number
transport number
date of service
appointment time
transport type
patient name
patient phone number
pick up street address
pick up city
pick up state
pick up zip code
destination street address
destination city
destination state
destination zip code
reason for transport 1
reason for transport 2
reason for transport 3
reason for transport 4
time of call
notified
dispatched
in route
arrive pick up
in route
arrive destination
available
route message
CRC

Fig. 3M-1

From AVL

record code = 31
record ID = transport number + terminal number + sequence (000)
CRC

Fig 3M-2

From CAD

record code = 70
record ID = transport number + terminal number + sequence (000)
transport number
vehicle number
pickup street address
pickup city
pickup state
pickup zip code
destination street address
destination city
destination state
destination zip code
CRC

Fig 3N-1

From AVL

record code = 71
record ID = transport number + terminal number + sequence (000)
transport number
pickup latitude
pickup longitude
destination latitude
destination longitude
CRC

Fig. 3N-2

From CAD

record code = 60
record ID = vehicle ID number
vehicle ID number
transport number
transport type
appointment time
transport status code
transport status time
driver employee number
attendant employee number
patient name
pick up address
pick up city
pick up state
pick up zip code
destination address
destination city
destination state
destination zip code
CRC

Fig. 30-1

From AVL

record code = 61
record ID = vehicle number
CRC

Fig. 30-2

From AVL

record code = 50
record ID = vehicle number
CRC

Fig. 3P-1

From CAD

record code = 51
record ID = vehicle ID number
vehicle ID number
transport number
transport type
appointment time
transport status code
transport status time
driver employee number
attendant employee number
patient name
pick up address
pick up city
pick up state
pick up zip code
destination address
destination city
destination state
destination zip code
CRC

Fig. 3P-2

From AVL

record code = 40
record ID = transport number + vehicle ID number + sequence (000)
vehicle ID number
transport number
date of service
appointment time
transport type
patient name
patient phone number
pick up street address
pick up city
pick up state
pick up zip code
destination street address
destination city
destination state
destination zip code
reason for transport 1
reason for transport 2
reason for transport 3
reason for transport 4
time of call
notified
dispatched
in route
arrive pick up
in route
arrive destination
available
CRC

Fig. 3Q-1

From CAD

record code = 41
record ID = transport number + vehicle ID number + sequence (000)
vehicle ID number
CRC

Fig. 3Q-2

From AVL

record code = 20
record ID = transport number + vehicle number
status level (1 - 8 from mobile data terminal switch device)
CRC

Fig. 3R-1

From CAD

record code = 21
record ID = transport number + vehicle number
status level (1 - 8 returned for acknowledgment)
CRC

Fig. 3R-2

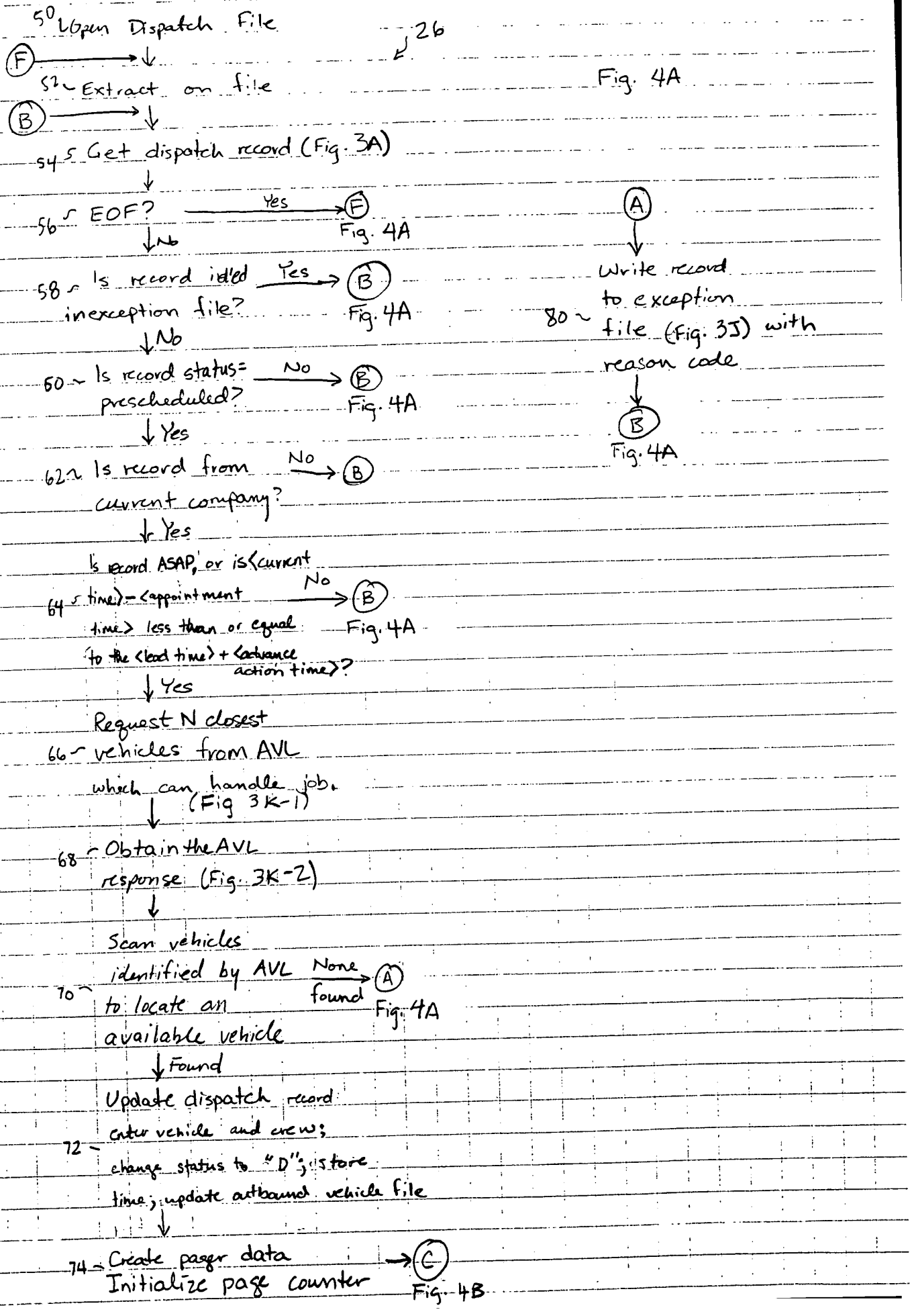
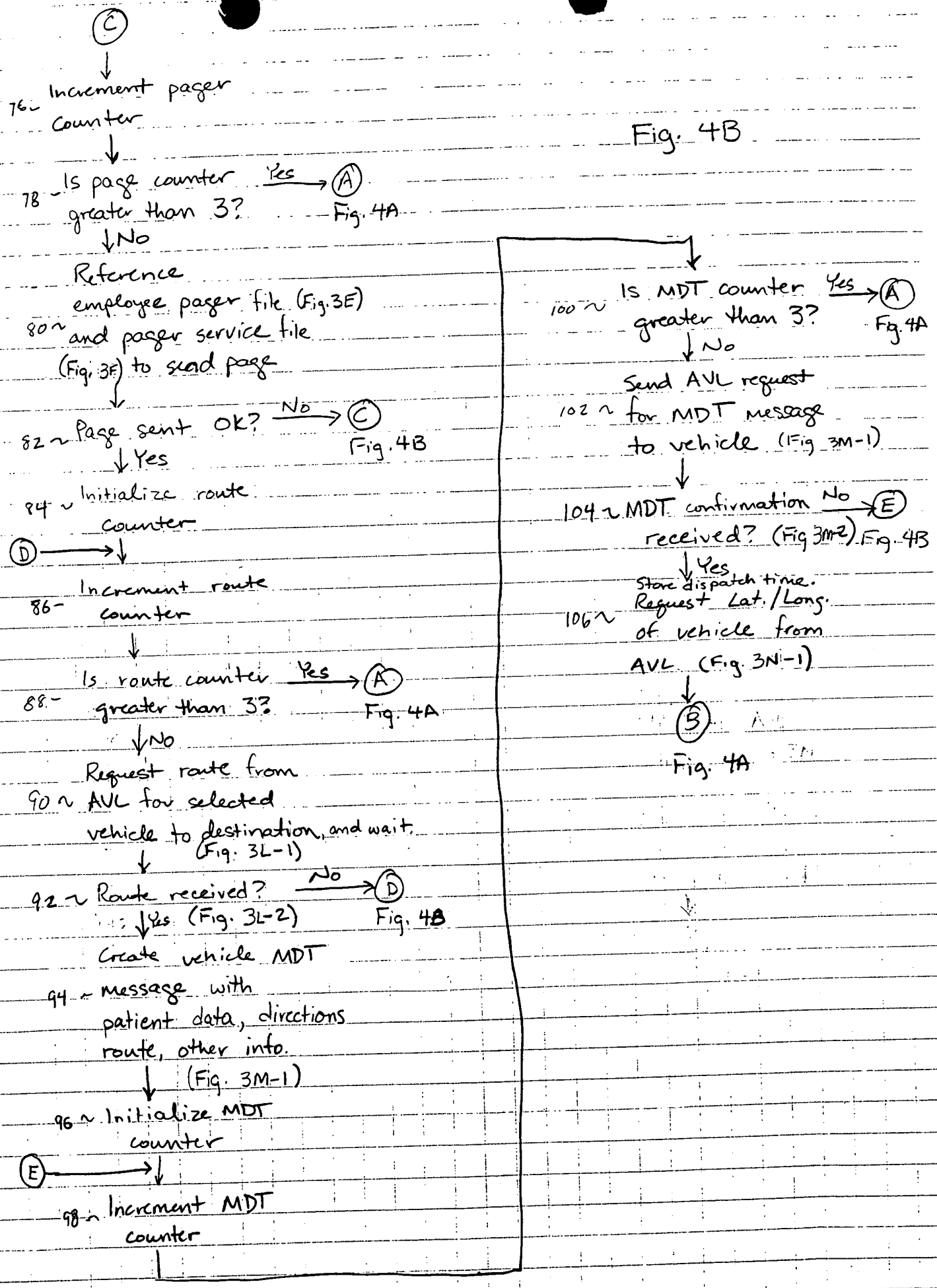
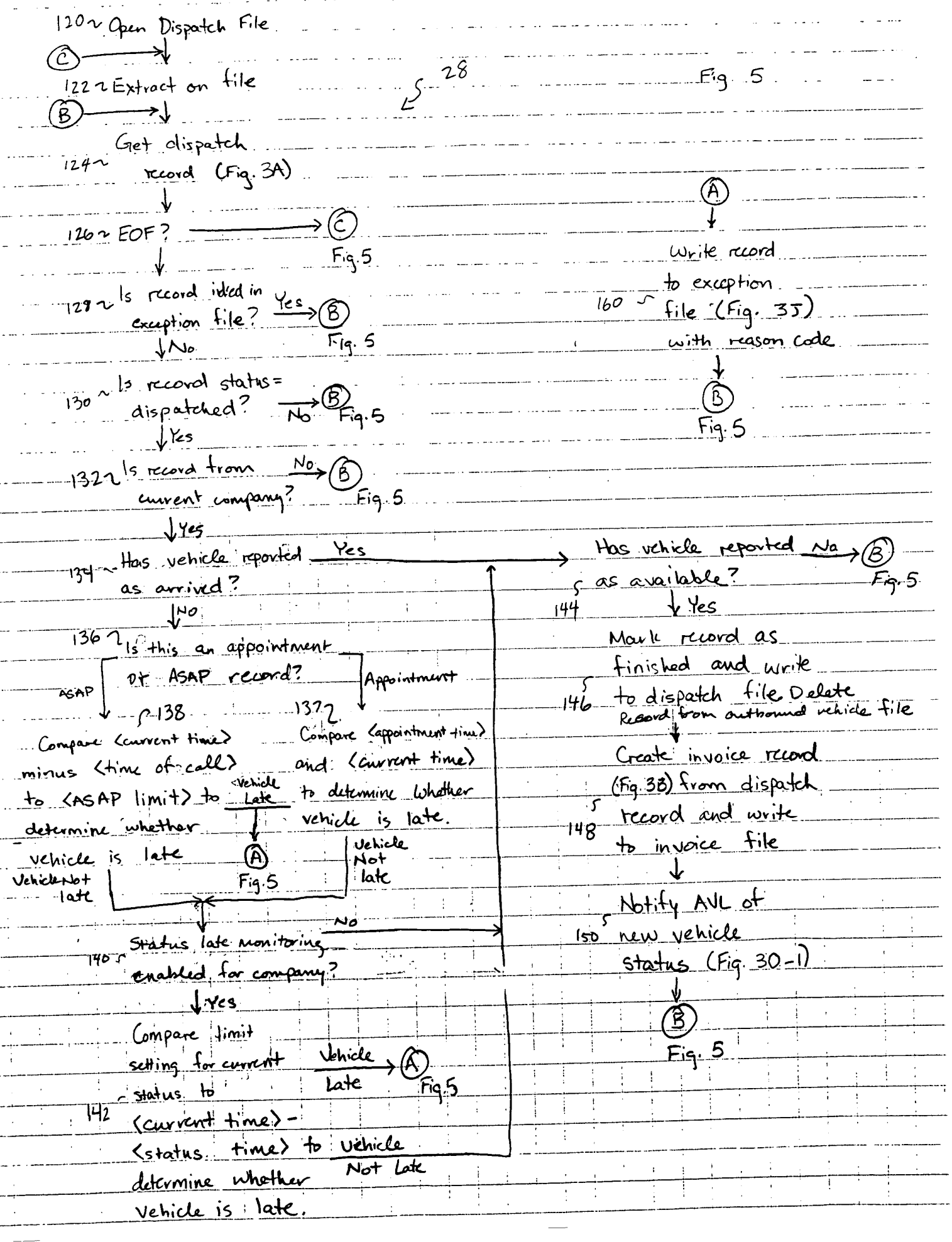

50 Open Dispatch File
F
26
Fig. 4A
52 Extract on file
B
54 Get dispatch record (Fig. 3A)
56 EOF?
Yes
F
Fig. 4A
No
58 Is record idled in exception file?
Yes
B
Fig. 4A
No
60 Is record status = prescheduled?
No
B
Fig. 4A
Yes
62 Is record from current company?
No
B
Yes
64 Is record ASAP, or is <current time> - <appointment time> less than or equal to the <load time> + <advance action time>?
No
B
Fig. 4A
Yes
66 Request N closest vehicles from AVL which can handle job. (Fig 3K-1)
68 Obtain the AVL response (Fig. 3K-2)
70 Scan vehicles identified by AVL to locate an available vehicle
None found
A
Fig. 4A
Found
72 Update dispatch record enter vehicle and crew; change status to "D"; store time; update outbound vehicle file
74 Create pager data Initialize page counter
C
Fig. 4B
A
80 Write record to exception file (Fig. 3J) with reason code
B
Fig. 4A

Fig. 4B


C
76 Increment pager counter
78 Is page counter greater than 3? Yes → A Fig. 4A
No
Reference employee pager file (Fig. 3E)
80 and pager service file (Fig. 3F) to send page
82 Page sent OK? No → C Fig. 4B
Yes
84 Initialize route counter
D
86 Increment route counter
88 Is route counter greater than 3? Yes → A Fig. 4A
No
Request route from
90 AVL for selected vehicle to destination, and wait. (Fig. 3L-1)
92 Route received? No → D Fig. 4B
Yes (Fig. 3L-2)
Create vehicle MDT
94 message with patient data, directions route, other info. (Fig. 3M-1)
96 Initialize MDT counter
E
98 Increment MDT counter
100 Is MDT counter greater than 3? Yes → A Fig. 4A
No
Send AVL request
102 for MDT message to vehicle (Fig. 3M-1)
104 MDT confirmation received? (Fig. 3M-2) No → E Fig. 4B
Yes
Store dispatch time.
106 Request Lat./Long. of vehicle from AVL (Fig. 3N-1)
B
Fig. 4A


28
Fig. 5
120 Open Dispatch File
C
122 Extract on file
B
124 Get dispatch record (Fig. 3A)
126 EOF?
C
Fig. 5
128 Is record idled in exception file?
Yes
B
Fig. 5
No
130 Is record status = dispatched?
No
B
Fig. 5
Yes
132 Is record from current company?
No
B
Fig. 5
Yes
134 Has vehicle reported as arrived?
Yes
Has vehicle reported as available?
144
No
B
Fig. 5
Yes
136 Is this an appointment or ASAP record?
ASAP
Appointment
138
Compare <current time> minus <time of call> to <ASAP limit> to determine whether vehicle is late
Vehicle Late
A
Fig. 5
Vehicle Not late
137
Compare <appointment time> and <current time> to determine whether vehicle is late.
Vehicle Not late
140 Status late monitoring enabled for company?
No
Yes
142 Compare limit setting for current status to <current time> - <status time> to determine whether vehicle is late.
Vehicle Late
A
Fig. 5
Vehicle Not Late
146 Mark record as finished and write to dispatch file. Delete record from outbound vehicle file
148 Create invoice record (Fig. 3B) from dispatch record and write to invoice file
150 Notify AVL of new vehicle status (Fig. 30-1)
B
Fig. 5
A
160 Write record to exception file (Fig. 3E) with reason code
B
Fig. 5

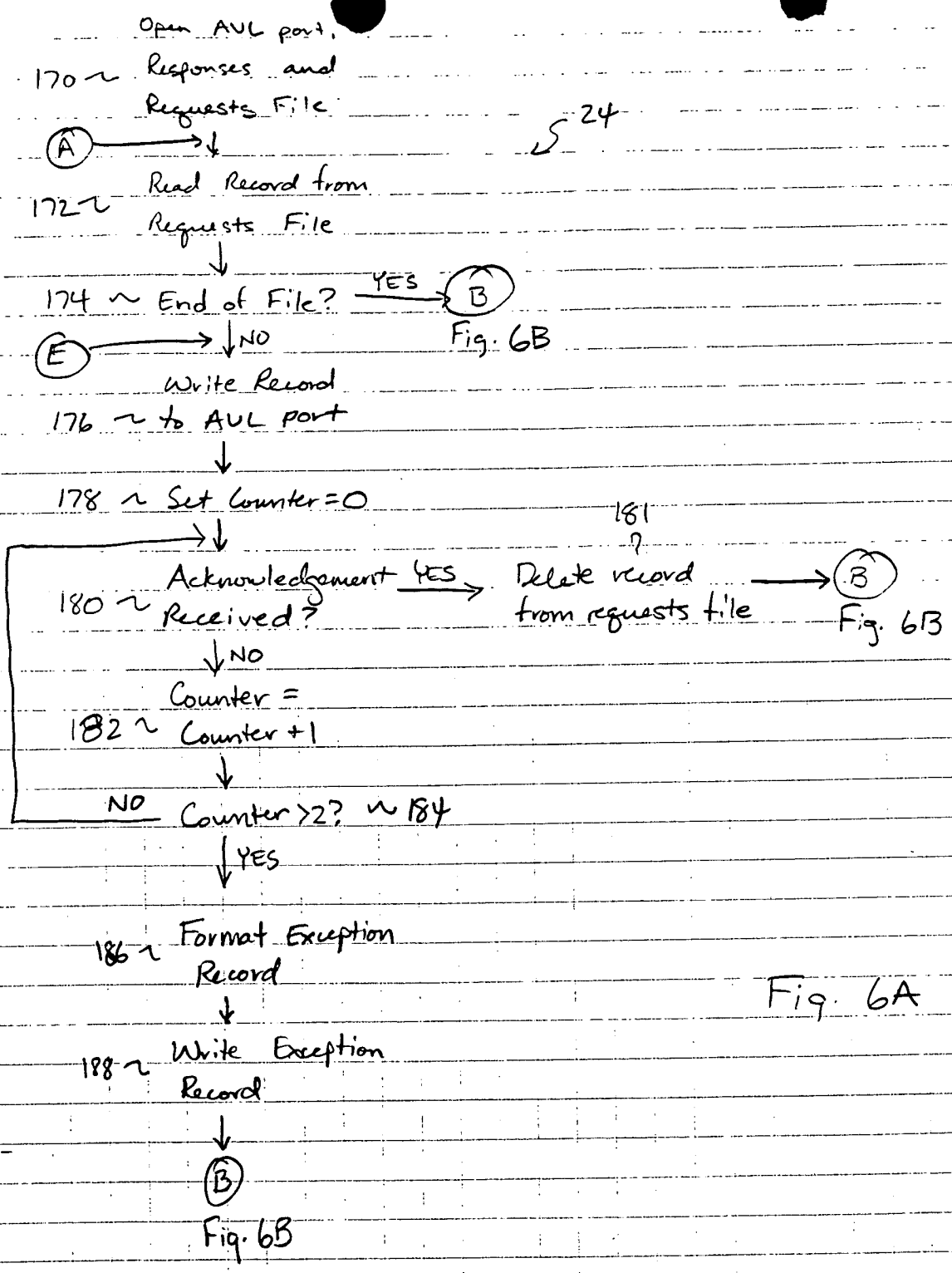

Open AUL port, Responses and Requests File
170
A
Read Record from Requests File
172
End of File?
174
YES
B
Fig. 6B
E
NO
Write Record to AUL port
176
Set Counter=0
178
Acknowledgement Received?
180
YES
Delete record from requests file
181
B
Fig. 6B
NO
Counter = Counter +1
182
Counter >2?
184
NO
YES
Format Exception Record
186
Write Exception Record
188
B
Fig. 6B

Fig. 6A

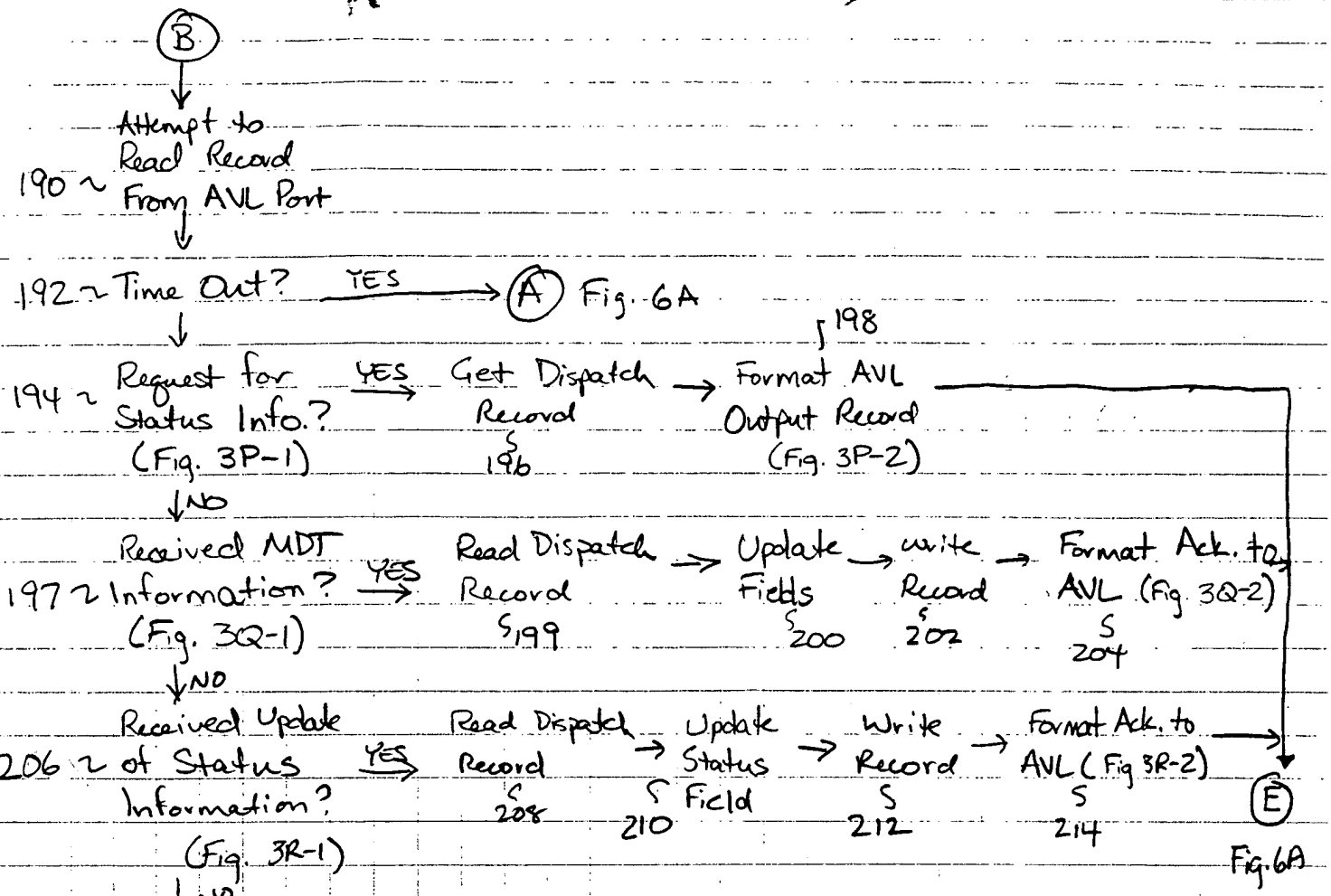

B
Attempt to Read Record From AVL Port
190
Time Out?
YES
A Fig. 6A
192
Request for Status Info.? (Fig. 3P-1)
194
YES
Get Dispatch Record
196
Format AVL Output Record (Fig. 3P-2)
198
NO
Received MDT Information? (Fig. 3Q-1)
197
YES
Read Dispatch Record
199
Update Fields
200
Write Record
202
Format Ack. to AVL (Fig. 3Q-2)
204
NO
Received Update of Status Information? (Fig. 3R-1)
206
YES
Read Dispatch Record
208
Update Status Field
210
Write Record
212
Format Ack. to AVL (Fig 3R-2)
214
E
Fig. 6A
NO
Returned AVL Lat./Long.? (Fig 3N-2)
216
YES
Read Dispatch Record
218
Update Lat/Long Field
220
Write Record
222
A
Fig. 6A
NO
Write Record to Responses File
224
A
Fig. 6A

Fig. 6B